ELSEVIER

Bioenergetics
(including Reviews on Bioenergetics)
Vol. 1231, 1995

BBA Biochimica et Biophysica Acta

Cumulative Contents

Information for Contributors *vii*

Review

Molecular biology of nicotinamide nucleotide transhydrogenase –a unique proton pump
T. Olausson, O. Fjellström, J. Meuller and J. Rydström (Sweden) 1

Regular Papers

Determination of the pigment stoichiometry of the photochemical reaction center of Photosystem II
C. Eijckelhoff and J.P. Dekker (The Netherlands) 21

Cadmium-induced luminescence of recombinant photoprotein obelin
V.S. Bondar, A.G. Sergeev, B.A. Illarionov, J. Vervoort and W.R. Hagen (Russia, The Netherlands) 29

Energy transfer in the photosynthetic antenna system of the purple non-sulfur bacterium *Rhodopseudomonas cryptolactis*
H. Kramer, G. Deinum, A.T. Gardiner, R.J. Cogdell, C. Francke, T.J. Aartsma and J. Amesz (The Netherlands, UK) 33

UV-B-induced degradation of the D1 protein in isolated reaction centres of Photosystem II
G. Friso, I. Vass, C. Spetea, J. Barber and R. Barbato (UK) 41

A two-electron reaction at the catalytic site of water oxidation in manganese-depleted Photosystem II vesicles in the presence of an electron donor. Coupled electron and proton transfer processes
M.J. Delrieu (France) 47

Initial spectroscopic characterization of the ciliate photoreceptor stentorin
R. Dai, T. Yamazaki, I. Yamazaki and P.-S. Song (USA, Japan) 58

Force-velocity relations of rat cardiac myosin isozymes sliding on algal cell actin cables in vitro
S. Sugiura, H. Yamashita, M. Sata, S.-i. Momomura, T. Serizawa, K. Oiwa, S. Chaen, T. Shimmen and H. Sugi (Japan) 69

Electron transfer reactions in Photosystem II core complexes from *Synechococcus* at low temperature – difference spectrum of $P680^+$ Q_A^-/P680 Q_A at 77 K
B. Hillmann and E. Schlodder (Germany) 76

Energy migration in *Rhodobacter sphaeroides* mutants altered by mutagenesis of the peripheral LH2 complex or by removal of the core LH1 complex
H. Kramer, M.R. Jones, G.J.S. Fowler, C. Francke, T.J. Aartsma, C.N. Hunter and J. Amesz (The Netherlands, UK) 89

Kinetics of ATP hydrolysis by the F_1-ATPase from *Bacillus* PS3: a reappraisal of the effects of ATP and Mg^{2+}
S. Pezennec, G. Berger, S. Andrianambinintsoa, N. Radziszewski, G. Girault, J.M. Galmiche and E. Bäuerlein (France, Germany) 98

Rapid Report

Raman detection of a peroxy intermediate in the hydroquinone-oxidizing cytochrome aa_3 of *Bacillus subtilis*
C. Varotsis, G.T. Babcock, M. Lauraeus and M. Wikström (Greece, USA, Finland) 111

Short Sequence-Paper

The coding sequence of the bovine ferrochelatase gene
H. Shibuya, D. Nonneman, M. Tamassia, O.L. Allphin and G.S. Johnson (USA) 117

Erratum

Erratum to "Inhibition by Ca^{2+} of the hydrolysis and the synthesis of ATP in Ehrlich ascites tumour mitochondria: relation to the Crabtree effect" [Biochim. Biophys. Acta 1228 (1995) 261–266]
K. Bogucka, V.V. Teplova, L. Wojtczak and Y.V. Evtodienko (Poland, Russian Federation) 121

Publisher's Note *v*

ELSEVIER

Bioenergetics
(including Reviews on Bioenergetics)
Vol. 1231, 1995

BBA Biochimica et Biophysica Acta

Cumulative Contents

Information for Contributors *vii*

Review

Molecular biology of nicotinamide nucleotide transhydrogenase –a unique proton pump
T. Olausson, O. Fjellström, J. Meuller and J. Rydström (Sweden) 1

Regular Papers

Determination of the pigment stoichiometry of the photochemical reaction center of Photosystem II
C. Eijckelhoff and J.P. Dekker (The Netherlands) 21

Cadmium-induced luminescence of recombinant photoprotein obelin
V.S. Bondar, A.G. Sergeev, B.A. Illarionov, J. Vervoort and W.R. Hagen (Russia, The Netherlands) 29

Energy transfer in the photosynthetic antenna system of the purple non-sulfur bacterium *Rhodopseudomonas cryptolactis*
H. Kramer, G. Deinum, A.T. Gardiner, R.J. Cogdell, C. Francke, T.J. Aartsma and J. Amesz (The Netherlands, UK) 33

UV-B-induced degradation of the D1 protein in isolated reaction centres of Photosystem II
G. Friso, I. Vass, C. Spetea, J. Barber and R. Barbato (UK) 41

A two-electron reaction at the catalytic site of water oxidation in manganese-depleted Photosystem II vesicles in the presence of an electron donor. Coupled electron and proton transfer processes
M.J. Delrieu (France) 47

Initial spectroscopic characterization of the ciliate photoreceptor stentorin
R. Dai, T. Yamazaki, I. Yamazaki and P.-S. Song (USA, Japan) 58

Force-velocity relations of rat cardiac myosin isozymes sliding on algal cell actin cables in vitro
S. Sugiura, H. Yamashita, M. Sata, S.-i. Momomura, T. Serizawa, K. Oiwa, S. Chaen, T. Shimmen and H. Sugi (Japan) 69

Electron transfer reactions in Photosystem II core complexes from *Synechococcus* at low temperature – difference spectrum of $P680^+$ Q_A^-/P680 Q_A at 77 K
B. Hillmann and E. Schlodder (Germany) 76

Energy migration in *Rhodobacter sphaeroides* mutants altered by mutagenesis of the peripheral LH2 complex or by removal of the core LH1 complex
H. Kramer, M.R. Jones, G.J.S. Fowler, C. Francke, T.J. Aartsma, C.N. Hunter and J. Amesz (The Netherlands, UK) 89

Kinetics of ATP hydrolysis by the F_1-ATPase from *Bacillus* PS3: a reappraisal of the effects of ATP and Mg^{2+}
S. Pezennec, G. Berger, S. Andrianambinintsoa, N. Radziszewski, G. Girault, J.M. Galmiche and E. Bäuerlein (France, Germany) 98

Rapid Report

Raman detection of a peroxy intermediate in the hydroquinone-oxidizing cytochrome aa_3 of *Bacillus subtilis*
C. Varotsis, G.T. Babcock, M. Lauraeus and M. Wikström (Greece, USA, Finland) 111

Short Sequence-Paper

The coding sequence of the bovine ferrochelatase gene
H. Shibuya, D. Nonneman, M. Tamassia, O.L. Allphin and G.S. Johnson (USA) 117

Erratum

Erratum to "Inhibition by Ca^{2+} of the hydrolysis and the synthesis of ATP in Ehrlich ascites tumour mitochondria: relation to the Crabtree effect" [Biochim. Biophys. Acta 1228 (1995) 261–266]
K. Bogucka, V.V. Teplova, L. Wojtczak and Y.V. Evtodienko (Poland, Russian Federation) 121

Publisher's Note *v*

Review

The dynamics of proton exchange between bulk and surface groups
M. Gutman and E. Nachliel (Israel) 123

Regular Papers

Expression of the wild-type and the Cys-/Trp-less $\alpha_3\beta_3\gamma$ complex of thermophilic F_1-ATPase in *Escherichia coli*
T. Matsui and M. Yoshida (Japan) 139

Exciton equilibration in the light-harvesting complex of Photosystem II of higher plants
G. Kehrberg, J. Voigt, T. Schrötter and G. Renger (Germany) 147

The electron transfer from hydrogenase and formate dehydrogenase to polysulfide reductase in the membrane of *Wolinella succinogenes*
A. Jankielewicz, O. Klimmek and A. Kröger (Germany) 157

Comparison of the transport characteristics of ceftibuten in rat renal and intestinal brush-border membranes
I. Naasani, K. Sato, K. Iseki, M. Sugawara, M. Kobayashi and K. Miyazaki (Japan) 163

Phosphorylation of the light-harvesting polypeptide LHIα of *Rhodobacter capsulatus* at serine after membrane insertion under chemotrophic and phototrophic growth conditions
M. Brand, A.F. Garcia, N. Pucheu, A. Meryandini, N. Kerber, M.H. Tadros and G. Drews (Germany, Argentina) 169

The in vivo regulation of hepatic and renal glucose-6-phosphatase by thyroxine
M.W. Voice, E.B. Borthwick, M.W.H. Coughtrie and A. Burchell (UK) 176

Electric parameters of Na^+/K^+-ATPase by measurements of the fluorescence-detected electric dichroism
D. Porschke and E. Grell (Germany) 181

Phycobilisome core mutants of *Synechocystis* PCC 6803
G. Ajlani, C. Vernotte, L. DiMagno and R. Haselkorn (France, USA) 189

Photoacoustic diagnostics of laser-induced processes in reaction centers of *Rhodobacter sphaeroides*
O.V. Puchenkov, Z. Kopf and S. Malkin (Israel) 197

Erratum

Erratum to: *Bradyrhizobium japonicum* hydrogen-ubiquinone oxidoreductase activity: quinone specificity, inhibition by quinone analogs, and evidence for separate sites of electron acceptor reactivity [Biochim. Biophys. Acta 1229 (1995) 334-346]
D.M. Ferber, B. Moy and R.J. Maier (USA) 213

Short Sequence-Papers

Cytochrome *b*-558 α-subunit cloning and expression in rat aortic smooth muscle cells
T. Fukui, B. Lassègue, H. Kai, R.W. Alexander and K.K. Griendling (USA) 215

Molecular cloning and sequencing of cytochrome *c'* from the phototrophic purple sulfur bacterium *Chromatium vinosum*
M.T. Even, R.J. Kassner, M. Dolata, T.E. Meyer and M.A. Cusanovich (USA) 220

Review

Reconstitution of membrane proteins into liposomes: application to energy-transducing membrane proteins
J.-L. Rigaud, B. Pitard and D. Levy (France) 223

Regular Papers

In vivo spectroscopic study of photoreceptor pigments of *Blepharisma japonicum* red and blue cells
N. Angelini, R. Cubeddu, F. Ghetti, F. Lenci, P. Taroni and G. Valentini (Italy) 247

NADPH oxidase activity of cytochrome *P*-450 BM3 and its constituent reductase domain
A.W. Munro, J.G. Lindsay, J.R. Coggins, S.M. Kelly and N.C. Price (UK) 255

Three-dimensional crystallization of the light-harvesting complex from *Mantoniella squamata* (Prasinophyceae) requires an adequate purification procedure
C. Welte, R. Nickel and A. Wild (Germany) 265

Analysis of time-dependent change of *Escherichia coli* F_1-ATPase activity and its relationship with apparent negative cooperativity
Y. Kato, T. Sasayama, E. Muneyuki and M. Yoshida (Japan) 275

Stimulation of oxidative phosphorylation by electrophoretic K^+ entry associated to electroneutral K^+/H^+ exchange in yeast mitochondria
S. Manon, X. Roucou, M. Rigoulet and M. Guérin (France) 282

Granal Photosystem II complexes contain only the high redox potential form of cytochrome *b*-559 which is stabilised by the ligation of calcium
V.P. McNamara and K. Gounaris (UK) 289

The mechanism of hydride transfer between NADH and 3-acetylpyridine adenine dinucleotide by the

pyridine nucleotide transhydrogenase of *Escherichia coli*
N.A. Glavas and P.D. Bragg (Canada, V6T 1Z3) 297

Cyclic reactions catalysed by detergent-dispersed and reconstituted transhydrogenase from beef-heart mitochondria; implications for the mechanism of proton translocation
L.A. Sazanov and J.B. Jackson (UK) 304

Triplet states in reaction center, light-harvesting complex B875 and its spectral form B840 from *Rubrivivax gelatinosus* investigated by absorbance-detected electron spin resonance in zero magnetic field (ADMR)
V. Jirsakova, F. Reiss-Husson, I. Agalidis, J. Vrieze and A.J. Hoff (France, The Netherlands) 313

Phosphorylation of thylakoids and isolated subthylakoid vesicles derived from different structural domains of the thylakoid membrane from spinach chloroplast
H. Stefánsson, L. Wollenberger, S.-G. Yu and P.-Å. Albertsson (Sweden) 323

Amino acid residues involved in functional interaction of vegetative cell ferredoxin from the cyanobacterium *Anabaena* sp. PCC 7120 with ferredoxin:NADP reductase, nitrite reductase and nitrate reductase
S. Schmitz and H. Böhme (Germany) 335

Cumulative Contents, Vol. 1231 342

Author Index 345